

Translation

PATENT COOPERATION TREATY

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PCT/DE2003/003524



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

10/532643

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2002P15490WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/DE2003/003524	International filing date (day/month/year) 23 October 2003 (23.10.2003)	Priority date (day/month/year) 24 October 2002 (24.10.2002)
International Patent Classification (IPC) or national classification and IPC H03K 19/177		
Applicant SIEMENS AKTIENGESELLSCHAFT		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet. <input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of _____ sheets.
3. This report contains indications relating to the following items: I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input checked="" type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 29 April 2004 (29.04.2004)	Date of completion of this report 13 April 2005 (13.04.2005)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/DE2003/003524

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
pages _____ 1-15 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the claims:
pages _____ 1-5 _____, as originally filed
pages _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the drawings:
pages _____ 1/3-3/3 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/DE2003/003524

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.

☒ claims Nos. 1-5

because:

☐ the said international application, or the said claims Nos. _____
relate to the following subject matter which does not require an international preliminary examination (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 1-5
are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. _____ are so inadequately supported
by the description that no meaningful opinion could be formed.

☐ no international search report has been established for said claims Nos. _____

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: III

- 1) Reference is made to the following document:

D1: SKLYAROV V: "Reconfigurable models of finite state machines and their implementation in FPGAs" JOURNAL OF SYSTEMS ARCHITECTURE, ELSEVIER SCIENCE PUBLISHERS BV, AMSTERDAM, NL, Vol. 47, Nos. 14-15, August 2002 (2002-08), pages 1043-1064, XP0004375020 ISSN: 1383-7621

- 2) A programmable logic device with the features as per the preamble of independent claim 1 is known from D1.

Furthermore, D1 is also concerned with the reconfigurability of the logic blocks during the entire period of operation of the logic device - cf. page 1043, abstract, lines 2, 3: "that allows their behaviour to be modified...during run-time", and page 1052, paragraph 6. "Reconfigurable FSMs based on cascaded model". In order to carry out the reconfiguration, as per D1, storage blocks have to be described anew with corresponding data, which, it is stated, can be done using a dual port RAM - cf. page 1054, final paragraph, lines 1, 2. D1 does not discuss the hardware required to supply the new configuration.

With regard to the circuit-related technical features of a module architecture carried out as per the invention, the characterising portion of the present claim 1 states that a configurable

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: III

changeover logic block is provided which performs the configuration.

The expression "configurable changeover logic block" is, however, vague and unclear and leaves the reader uncertain as to the meaning of the technical feature in question. The fact that in the device according to D1 as well, the new configuration data has to be supplied via a corresponding circuit is self-evident, as is the fact that this is a logic circuit in which changeover processes take place as a matter of course. In addition, any circuit can be designated as "configurable". The special difference with respect to the subject matter of the invention, and in what way the latter defines an architecture, is not apparent from claim 1. The description, page 6, lines 9-13, according to which in the invention, in contrast to the prior art, "the outputs of this logic block are connected at least in part to the code region of the configurable logic blocks, said code region being inaccessible in other embodiments in operation" is completely incomprehensible. Dependent claims 2-5 do nothing to clarify this either: claims 2 and 3 are themselves unclear, since it is not defined what is meant by "plane", whilst the features of claims 4 and 5 merely relate to the prior art as per D1.

Consequently, the subject matter of these claims is not clear (PCT Article 6).

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: III

- 3) With respect to the description, page 13, lines 27-31, page 14, lines 15-18 and page 15, lines 22-27, the "configurable changeover logic block" appears to be an additional PLD ("Extra PLD"), which is equivalent to the "logic blocks with configurable properties", wherein the extra PLD and said logic blocks "not only change over reciprocally, but indeed also bring about the programming of the respective other part". However, no concrete embodiment of this is given in the description/drawings. In this regard, attention is drawn to the fact that the use of a reconfigurable logic circuit to control other configurable logic circuits is in essence known from D1 - cf. D1, page 1061, paragraph 10 "Using reconfigurable FSMs for practical applications".